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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,138	05/31/2006	Dwight K. Buckle	19350-103922	2005
28886	7590	07/21/2009		
CLARK HILL, P.C. 500 WOODWARD AVENUE, SUITE 3500 DETROIT, MI 48226				
EXAMINER				
LUK, EMMANUEL S				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
07/21/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/581,138

Applicant(s)

BUCKLE ET AL.

Examiner

EMMANUEL S. LUK

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 and 14-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 5/31/06: 12/10/07

DETAILED ACTION

1. Claims 1-22 are pending, claims 1-5 and 14-22 are non-elected and withdrawn.

Claims 6-13 have been examined as shown below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 6-8, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potter (20020195736) in view of Carmi (3548451) and Hirose (JP-2003001634).

Potter teaches a first and second mold portions that form a mold cavity including a fill plate with inlet for introducing the expandable plastic material into the mold cavity.

Potter fails to teach a cavity pull system with a pin forming at least one out of die draw feature.

Carmi teaches an apparatus with a forming mold 16 with mold cavity 14 for expanded plastic articles (such as polystyrene particles), the apparatus having a rod 22 with head 23 that is moved (see Col. 5, lines 25-41).

Hirose teaches a molding device including a rack and pinion 60, 70 that are used to actuate a rack 50 that drives the movement of an undercut mold 40. The undercut mold being the same structure as the claimed pin is actuated into the claimed mold.

It would have been obvious for one of ordinary skill in the art to modify Potter with a movable rod as taught by Carmi that is similar to the claimed pin for forming a feature and substituting the movement drive of Carmi with the rack and pinion as taught by Hirose because it allows for a simpler movement drive that allows for movement of the undercut portion in the mold and for removing the portion from the molded article.

5. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potter (20020195736) in view of Hirose (JP-2003001634) as applied to claim 6 above, and further in view of Maloney (4114759).

Potter in view of Hirose fails to specifically teach the mold elements being made from brass or stainless steel.

In regards to the metal materials of the mold including brass and stainless steel, these are well known metals used in constructing tools and it would have been obvious for one of ordinary skill in the art to incorporate these materials for the mold and further Maloney teaches the production of foamed polystyrene particles can be molded by "molds made from aluminum, stainless steel, or brass" (see Col. 4, lines 32-34), the

foamed polystyrene particles being molded and formed by heat including steam (Col. 4, lines 28-30). It would have been obvious for one of ordinary skill in the art to modify Potter in view of Hirose with the mold parts formed from stainless steel or brass as taught by Maloney as these are well known components used in molds that utilize a steam chest for heating and forming the foamed polystyrene particles.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892 form.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EMMANUEL S. LUK whose telephone number is (571)272-1134. The examiner can normally be reached on Monday-Fridays from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yogendra N Gupta/
Supervisory Patent Examiner, Art Unit 1791

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